CLAIMS

That which is claimed is:

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1. A medical device delivery system for a self-expanding stent comprising:

an outer sheath comprising an elongated tubular body member having distal and proximal ends and an inside and outside diameter; and an enlarged distal section having an inside and outside diameter and a distal end, and a proximal end bonded to the distal end of the tubular body member, said distal section having a greater inside and outside diameter than said inside and outside diameter of said tubular body member, and said enlarged distal section being formed from a relatively clear polymeric material;

an inner shaft located coaxially within said outer sheath, said shaft having a distal end and a proximal end; and

a self-expanding stent located within said relatively clear distal section of said outer sheath, said stent making frictional contact with said outer sheath, and said shaft connected to said stent for delivery of said stent.

2. A medical device delivery system as defined in Claim 1 wherein said sheath includes a flexible distal tip bonded to the enlarged distal section, said distal tip comprising a polymeric

formulation containing from about 20 to 75 weight percent of a polymeric radiopaque agent to be substantially more radiopaque than the distal tubular section and the tubular body member of the sheath.

3. A medical device delivery system as defined in Claim 2 wherein said elongated tubular body member is comprised of a polymeric formulation containing less than about 20 weight percent of radiopaque agent to be substantially less radiopaque than the distal tip.

4. A medical device delivery system as defined in Claim 2 wherein said enlarged distal section is comprised of a clear nylon polymer.

5. A medical device delivery system as defined in Claim 4 wherein said elongated tubular body member is comprised of an opaque nylon material.

6. A medical device delivery system for a self-expanding stent comprising:

an outer sheath comprising an elongated tubular body member having distal and proximal ends; and a distal section having a distal end, and a proximal end bonded to the distal end of the

tubular body member, and said distal section being formed from a relatively clear polymeric material;

an inner shaft located coaxially within said outer sheath, said shaft having a distal end and a proximal end; and

a self-expanding stent located within said distal section of said outer sheath, said stent making frictional contact with said outer sheath, and said shaft connected to said stent for delivery of said stent.

7. A medical device delivery system as defined in Claim 6 wherein said sheath includes a flexible distal tip bonded to the distal section, said distal tip comprising a polymeric formulation containing from about 20 to 75 weight percent of a polymeric radiopaque agent to be substantially more radiopaque than the distal section and the tubular body member of the sheath.

8. A medical device delivery system as defined in Claim 7 wherein said elongated tubular body member is comprised of a polymeric formulation containing less than about 20 weight percent of a radiopaque agent to be substantially less radiopaque than the distal tip.

9. A medical device delivery system as defined in Claim 6

wherein said distal section is comprised of a clear nylon polymer.

10. A medical device delivery system including a sheath comprising a polymeric tubular body member and a flexible distal tubular section bonded to the tubular body member, the distal tubular section is formed from a relatively clear polymeric material so that an implantable medical device when placed within the sheath may be viewed, a flexible distal tip bonded to the distal tubular section, said distal tip comprising a polymeric formulation containing from about 20 to 75 weight percent of a polymeric radiopaque agent to be substantially more radiopaque than the distal tubular section and the tubular body member of the sheath.

11. A medical device delivery system as defined in Claim 10 wherein the tubular body member and the distal tubular section have inside and outside diameters and in which the diameter of the inside and outside diameter of the distal tubular section is greater than the inside and outside diameter of the tubular body member of the sheath.

12. A medical device delivery system for an implantable medical device comprising:

an outer sheath comprising an elongated tubular body member having distal and proximal ends and an inside and outside diameter; and an enlarged distal section having an inside and outside diameter and a distal end, and a proximal end bonded to the distal end of the tubular body member, said distal section having a greater inside and outside diameter than said inside and outside diameter of said tubular body member, and said enlarged distal section being formed from a relatively clear polymeric material;

an inner shaft located coaxially within said outer sheath, said shaft having a distal end and a proximal end; and

an implantable medical device located within said enlarged distal section of said outer sheath, said medical device making frictional contact with said outer sheath, and said shaft connected to said medical device for delivery of said medical device.

13. A medical device delivery system as defined in Claim 12 wherein said sheath includes a flexible distal tip bonded to the distal section, said distal tip comprising a polymeric formulation containing from about 20 to 75 weight percent of a polymeric radiopaque agent to be substantially more radiopaque than the distal section and the tubular body member of the sheath.

14. A medical device delivery system as defined in Claim 13 wherein said elongated tubular body member is comprised of a polymeric formulation containing less than about 20 weight percent of a radiopaque agent to be substantially less radiopaque than the distal tip.

15. A medical device delivery system as defined in Claim 12 wherein said enlarged distal section is comprised of a clear nylon polymer.

16. A medical device delivery system as defined in Claim 14 wherein said elongated tubular body member is comprised of an opaque nylon material.

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